Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

17. (Currently Amended) A method of processing a transport steam comprising the steps of:

(a) parsing the transport stream to derive multiple elemental streams including associated program identifiers;

(b) using the associated program identifiers to assign each stream a direct memory access channel;

(c) associating each direct memory access channel with a specific location in the memory of a host computer **by storing a context in the local memory for each direct memory access channel, the context including a current transfer target address, a byte count and a pointer into a data structure in the local memory that contains frame descriptors, each of which contains a pointer to the starting address of a host memory block, the size of the host memory block, any possible segmentation of the host memory block and a pointer to a next available host memory block;** and

(d) performing direct memory access transfers of the multiple elementary streams to corresponding locations in the memory of the host computer using the direct memory access channels ~~without being controlled by the microprocessor of the host computer~~.

18. (Previously Presented) The method of claim 17 wherein the multiple elemental streams are transferred between a local memory and the memory of the host computer.

19. (Previously Presented) The method of claim 17 wherein the multiple elemental streams are transferred between a transport controller and the memory of the host computer.

Claim 20 (Canceled).

21. (Previously Presented) The method of claim 19 wherein the direct memory access transfer is an automatic programmable transport interface operation wherein data is not buffered in a local memory prior to the transfer to the memory of the host computer.

Claims 22-23 (Canceled).

24. (Previously Presented) The method of claim 17 further comprising the step of transferring the multiple elementary streams to an end user system.

25. (Previously Presented) The method of claim 24 wherein the end user system comprises an audio-visual system and wherein the step of transferring the multiple elementary steams to an end user system comprises transferring the multiple elementary streams through an audio-visual interface.

26. (Previously Presented) The method of claim 24 wherein the end user system comprises a networked computer system and the step of transferring the multiple elementary streams to an end user system comprises transferring the multiple elementary streams through a network interface.

27. (Currently Amended) A system for receiving and processing a transport stream comprising:

a receiver for the transport stream having a local memory and a transport controller; and

a host computer having a host memory, a host central processing unit (CPU) and a direct memory access (DMA) engine;

wherein the transport controller is configured to parse the transport stream to derive multiple elemental streams including associated program identifiers and

wherein the local memory is configured to assign each stream a DMA channel using the associated program identifiers, and associate each DMA channel with a specific location in the host memory **by identifying corresponding pointers to a base address of a local memory channel context descriptor and a host memory channel context descriptor, wherein each channel context descriptor contains a frame descriptor that associates a region of the local memory with a corresponding region of the host memory between which DMA transfers of data occur**; and

wherein the DMA engine uses the DMA channels to transfer the multiple elementary streams to corresponding locations in the host memory ~~without being controlled by the host CPU~~.

Claims 28-30 (Canceled).

31. (Previously Presented) The system of claim 27 wherein the transport controller is configured by the local memory to associate the program identifiers with corresponding DMA channels so that data is directly transferred between the transport controller and the host memory without being buffered in the local memory prior to transfer.